Pollinators Thematic Network (PTN)

The Pollinator Information Network of the Americas

Pollinator Data Digitizer

User Manual
and
Training Guide

Editors: Antonio Saraiva[1], Etienne A. Cartolano Jr.[1], Elizabeth Sellers[2], Pedro Correa[1], Cassandra Harrison[2], Laurie Davies Adams[3]

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[1] Laboratory of Agricultural Automation, Polytechnic School, University of Sao Paulo <http://www.laa.pcs.poli.usp.br/>
[2] National Biological Information Infrastructure (NBII) <http://www.nbii.gov>
[3] The Pollinator Partnership (P2) <http://www.pollinator.org>

TABLE OF CONTENTS

1 INTRODUCTION 4

2 HOME PAGE 4

2.1 OVERVIEW 4

3 General Interface Overview 6

4 Save Preserved or Observed Specimen Data 7

4.1 OVERVIEW 7

4.1.1 Specimens – Record-level elements 7

4.1.2 Specimens – Taxonomic elements 10

4.1.3 Specimens – Identification qualifier element 11

4.1.4 Specimens – Locality elements 12

4.1.5 Specimens – Collecting elements 13

4.1.6 Specimens – Biological elements 14

4.1.7 Specimens – Geospatial elements 15

4.1.8 Specimens – References elements 18

5 Save Interaction Data 19

5.1 OVERVIEW 19

5.1.1 Preserved Specimens Interactions (Save interaction data) 20

5.1.2 Save Preserved and Observed Specimens Interaction 22

5.1.3 Save Observed Specimens Interactions 24

6 View Saved Records 26

6.1 OVERVIEW 26

6.1.1 View Preserved Specimens 27

6.1.2 View Observed Specimens 27

6.1.3 View Interaction Data 27

Tapir provider – Preserved or Observed Specimen/Interaction 28

6.2 OVERVIEW 28

TABLE OF FIGURES

Figure 1 - Pollinator Data Digitizer Home Page. 5

Figure 2 - Save Preserved or Observed Specimen Data – Record-level elements table 9

Figure 3 - Save Preserved or Observed Specimen Data – Taxonomic elements table 10

Figure 4 - Save Preserved or Observed Specimen Data – Identification qualifier 12

Figure 5 - Save Preserved or Observed Specimen Data – Locality elements table 12

Figure 6 - Save Preserved or Observed Specimen Data – Collecting elements table 13

Figure 7 - Save Preserved or Observed Specimen Data – Biological elements table 15

Figure 8 - Save Preserved or Observed Specimen Data – Geospatial elements table 16

Figure 9 - Save Observation or Species Data– Specimens – References elements table 18

Figure 10 - Save Interaction Data – Navigation Options 19

Figure 11 - Save Preserved Specimens Interaction Data 21

Figure 12 - Save Preserved Specimen and Observed Specimens Interaction Data 23

Figure 13 - Save Observed Specimens Interaction Data 25

Figure 14 - View Saved Records 26

Figure 15 - View Observation Data - Expanded record view. 27

1 INTRODUCTION

This manual includes instructions for pollinator specimen, collection, and observation data managers that wish to digitize pollinator and plant-pollination interaction records using the online Pollinator Data Digitizer.

The Pollinator Data Digitizer is an online tool for digitizing pollinator specimen and observation records, and plant-pollinator interaction records. Digital records created using this tool are standardized according to the DarwinCore schema (DwC) and the Interaction Extension. These digital records of Pollinator observations and specimens can be served to the IABIN PTN Data Portal <http://pollinators.iabin.net/portal/> and through it to the Global Biodiversity Information Facility (GBIF) <http://www.gbif.org/>.

The first version of the Interaction Extension to the DwC schema was jointly developed by the Agricultural Automation Laboratory, at the Universidade de São Paulo (with support from IABIN and FAPESP – The State of Sao Paulo Research Foundation) and by the Reference Center on Environmental Information (CRIA) (with support from FAO – The United Nations Food and Agriculture Organization).

The Pollinator Data Digitizer is one of the products of the IABIN Pollinators Thematic Network (IABIN-PTN), a consortium that consists of the Pollinator Partnership (coordinating institution), Agricultural Automation Laboratory (LAA) of the University of São Paulo, the Integrated Taxonomic Information System (ITIS), and the National Biological Information Infrastructure (NBII).

The Pollinator Data Digitizer was developed by the Agricultural Automation Laboratory (LAA) team in cooperation with and with the support and review from the team members of the IABIN-PTN.

2 HOME PAGE

2.1 OVERVIEW

The Pollinator Data Digitizer is available online at <http://pollinators.iabin.net/digitizer>. To access the digitizer **Home** page, type this URL into the address line of your Internet browser application and press the Enter key.

> ***Note**: The Web interface of the Pollinator Data Digitizer may be browsed using Microsoft Internet Explorer, Mozilla/Firefox, and Netscape.*

On the **Home** page, users can choose their preferred language; find explanations or instructions for using the digitizer; and choose between the following functional areas:

- Save preserved or observed specimen data
- Save interaction data
- View saved records
- Tapir provider – Preserved or observed specimen
- Tapir provider – Interaction

More information about the developers of this tool (organization names and the **Credits** link); instructions for contacting them (the **Contact Us** link); and the application version can be found at the bottom or in the footer area of all pages on this Web application including the **Home** page (Figure 1, Item 7).

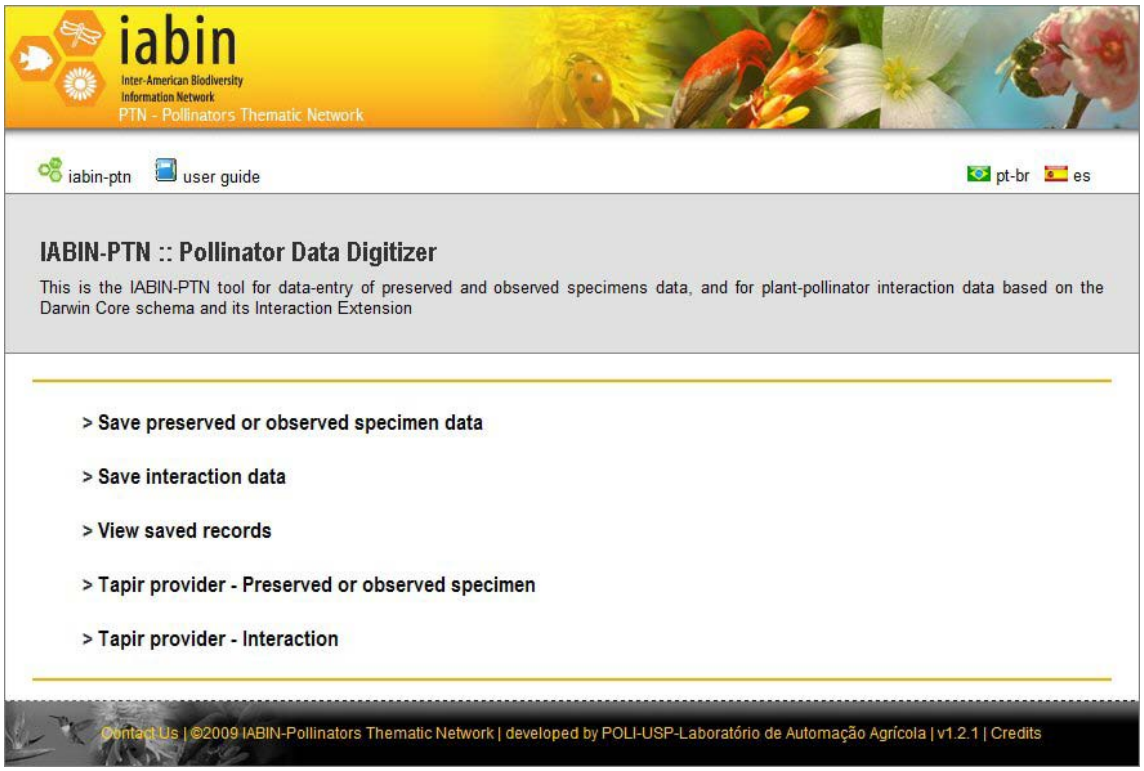
iabin
Inter-American Biodiversity Information Network
PTN - Pollinators Thematic Network
iabin-ptn
user guide
pt-br
es
IABIN-PTN :: Pollinator Data Digitizer
This is the IABIN-PTN tool for data-entry of preserved and observed specimens data, and for plant-pollinator interaction data based on the Darwin Core schema and its Interaction Extension
> Save preserved or observed specimen data
> Save interaction data
> View saved records
> Tapir provider - Preserved or observed specimen
> Tapir provider - Interaction
Contact Us | ©2009 IABIN-Pollinators Thematic Network | developed by POLI-USP-Laboratório de Automação Agrícola | v1.2.1 | Credits

Figure 1 - Pollinator Data Digitizer Home Page.

The following items and sections describe each of the components on the **Home** page, their function, and how to use them.

Available Languages icons: Click on one of the flag icons in the top right corner of the home page to choose your preferred language. The Pollinator Data Digitizer interface is available in pt-br = Portuguese/Brazilian, en = English and es = Spanish.

> ***Note**: The preferred language options available in the Pollinator Data Digitizer tool's online interface only affect inline text in the interface. Text in records digitized using this tool will be displayed in the language in which it was submitted (or typed in) by the user.*

Save preserved species or observed specimen data link: Provides access to the **Save Preserved or Observed Specimen Data** page (Figure 2) where users can create or digitize preserved or observed specimen records by defining taxonomic, biological, geospatial and many other elements associated with each specimen.

Save interaction data link: Provides access to the **Save Interaction Data** page where users can digitize records of interactions between specimens that are represented by preserved or observed specimens.

View saved records link: Provides access to the View Saved Records page where users can view three different types of data that they have digitized: preserved specimens, observed specimens and interaction data.

Tapir provider – Preserved or observed specimen link: Provides access to metadata about the TAPIR provider service for serving specimen (observed or preserved) records to data portals.

Tapir provider – Interaction link: Provides access to metadata about the TAPIR provider service for serving specimen interaction records to data portals.

Footer area: More information about the developers of this tool (organization names and the **Credits** link); instructions for contacting them (the **Contact Us** link); and the application version can be found at the bottom or in the footer area of all pages on this Web application including the **Home** page.

3 General Interface Overview

There are several common elements that appear throughout the interface of the Pollinator Data Digitizer online interface. The following paragraphs describe each of these elements, their function, and how to use them.

- **Home icon** home : Click on the **Home** icon to return to the **Home** page of the Pollinator Data Digitizer.
- **IABIN-PTN icon** iabin-ptn : Click on the **IABIN-PTN** icon to go to the **Home** page of the IABIN Pollinators Thematic Network Web site.
- **User Guide icon** user guide : Click on the **User Guide** icon to view instructions in a pop-up window.
- **Required field**: Required fields are indicated by the label '**Required**' that appears to the right of the field. If you click on the Insert button before you have filled all of the required fields, a warning message will display.

e.g.

- **Insert button**

: Click on the **Insert** button to add or save the information selected/filled in the form.

- **Other checkbox** Other : **Other** checkboxes are associated with some of the fields in the user interface of this tool. They allow the user to add new options to drop-lists. The **Other** checkbox is displayed when the **Null** checkbox is not selected. Click in the **Other** checkbox to display a text field in which the user can type the name or value of a new option that is to be added to a drop-list.

- **Null checkbox** Null : **Null** checkboxes are associated with some of the fields in the user interface of this tool. They are often selected by default. Either choose an option from the drop-list that displays after clicking in the **Null** checkbox; or add options to the drop-list by typing them into the field that displays after clicking in the **Other** checkbox.

4 Save Preserved or Observed Specimen Data

4.1 OVERVIEW

The **Save Preserved or Observed Specimen Data** page (Figure 2) allows users to create records that consist of several tables of elements: Record-level elements; Taxonomic elements; Identification qualifier; Locality elements; Collecting elements; Biological elements; Geospatial elements; and References elements. The following numbered paragraphs describe each of these tables and the elements they contain, their function, and how to use them.

4.1.1 Specimens – Record-level elements

The **Record-level elements** table on the **Save Preserved or Observed Specimen Data** page allows users to register information specific to or at the individual record level. For definitions and examples of each of the elements in this table, reference Darwin core 2 elements definitions v1.4[4] or click on the **Help** icon that is displayed next to each record-level element.

[4] Available at <http://wiki.tdwg.org/twiki/bin/view/DarwinCore/DarwinCoreDraftStandard>

Note: *To add a new option to the* ***Institution code****, or* ***Collection code*** *drop-lists, type the name of the new option into the text field that displays after clicking in the* ***Other*** *checkbox.*

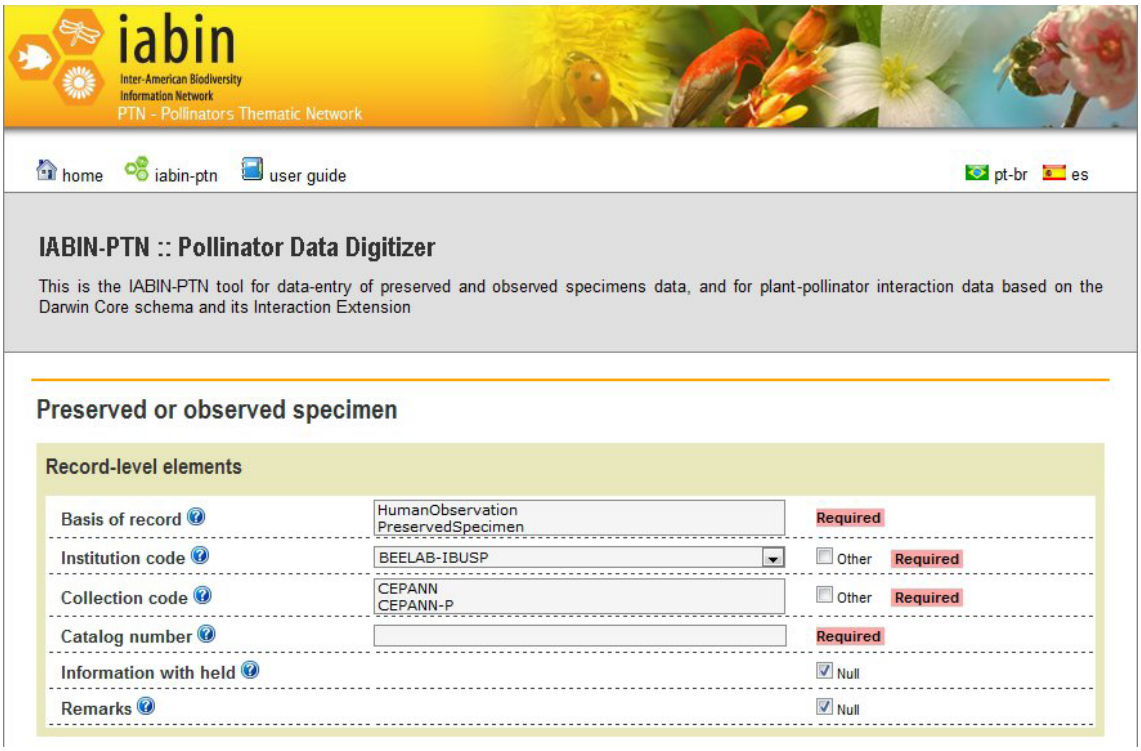

Figure 2 - Save Preserved or Observed Specimen Data – Record-level elements table

Basis of record drop-list: Choose an option from the drop-list that defines the basis of the record you are digitizing. This is a descriptive term that indicates whether the record represents an object or an observation. The options currently available are PreservedSpecimen (which should be used for collected specimens) and HumanObservation (which should be used for observations or observed specimens).

Institution code drop-list: Choose an institution code from the drop-list. The institution code is a code (or acronym) identifying the institution administering the collection in which the organism record is cataloged. No global registry currently exists for institutional codes; use the code that is standard at your institution or in your discipline.

Collection code: Choose a collection code from the drop-list. The collection code is a code (or acronym) identifying the collection within the institution in which the organism record is cataloged.

Catalog number field: Type the catalog number of the organism record into the text field. The catalog number is an alphanumeric value identifying a record within the collection. It is highly recommended that each record be uniquely identified within a collection by this value. It is also recommended that each record be uniquely identified in a global context by the combination of institutioncode, collectioncode and catalognumber.

Information withheld field: To add information to this field, type the information into the text field that displays after clicking in the **Null** checkbox. The field may contain brief descriptions of

additional information that may exist, but that has not been made public. Information about obtaining the withheld information should be sought from the administrative contact identified in the TAPIR provider resource metadata (curator, collection manager).

Remarks field: To add information to this field, type the information into the text field that displays after clicking in the **Null** checkbox.

4.1.2 Specimens – Taxonomic elements

The **Taxonomic elements** table on the **Save Preserved or Observed Specimen Data** page allows users to register taxonomic information specific to or at the individual record level. For the definitions of each of the elements in this table, reference Darwin core 2 elements definitions v1.4 or click on the **Help** icon that is displayed next to each element.

> ***Note:*** *Refer to the Integrated Taxonomic Information System (ITIS) <http://www.itis.gov/> for correct spelling of taxonomic terms. A World Bee Checklist is also available at ITIS.*

Figure 3 - Save Preserved or Observed Specimen Data – Taxonomic elements table

Scientific name list: Choose a scientific name that describes the species in the record you are digitizing. This is the full name of the lowest level taxon to which the organism has been identified in the most recent accepted determination, specified as precisely as possible, including name-author, year of authorship, sensu or sec. (according to or following) author, and indication of uncertainty. A scientific name is conceptually equivalent to a full taxonomic identification as given by the identifier (verbatim). It does not include the identifier name or date of identification.

> ***Note:*** *To add a new scientific name to the **Scientific name** list, type the new scientific name into the text field that displays after clicking in the **Other** checkbox.*

Taxonomic fields: To define the name of the taxonomic group in which the organism is classified, choose an option from the drop-list that displays after clicking in the Null checkbox. To add a new taxonomic group name to a drop-list, type the name of the Kingdom, Phylum, Class, Order, Family, or Genus into the text field that displays after clicking in the **Other** checkbox. To return to the drop-list for each of these fields, deselect the **Other** checkbox. To return these fields to a null value, click in the **Null** checkbox.

> ***Note:*** *To add a new option to any* ***Taxonomic element*** *drop-list, type the name of the option into the text field that displays after clicking in the* ***Other****.*
>
> ***Note:*** *To return to the drop-list of any* ***Taxonomic element*** *field, click on the* ***Other*** *checkbox to deselect it. To return any* ***Taxonomic element*** *field to the default null value, click in or select the* ***Null*** *checkbox.*

Specific epithet: To define a specific epithet of the scientific name applied to the organism in this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

Infraspecific rank: To define an infraspecific rank (subspecies, variety, forma) of the infraspecific epithet of the organism in this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

Infraspecific epithet: To define an infraspecific epithet of the scientific name applied to the organism to this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

Author year scient. name: To define an author and year of publication in this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox. More than one author can be listed in a concatenated string e.g. Smith(1985)Jones(1992). The text in this field should be formatted with parentheses and year according to the conventions of the applicable nomenclatural code.

Nomenclatural code: The **Nomenclatural code** field is set to a null value by default. To add a nomenclatural code to this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

4.1.3 Specimens – Identification qualifier element

The **Identification qualifier** element allows users to register a standard term that qualifies the identification of the organism when doubts have arisen as to its identity (Darwin core 2 elements definitions v1.4).

> Example:
>
> - Subspecies is in question

To add an Identification qualifier in this field, type it into the text field that displays after clicking in the **Null** checkbox. Click on the Insert button to add or save the Identification qualifier information.

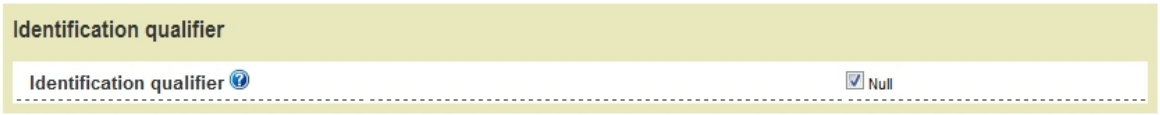

Figure 4 - Save Preserved or Observed Specimen Data – Identification qualifier

4.1.4 Specimens – Locality elements

This **Locality elements** table on the **Save Preserved or Observed Specimen Data** page allows users to register geographic or locality information specific to or at the individual record level. For the definitions of each of the elements in this table, reference Darwin core 2 elements definitions v1.4 or click on the **Help** icon that is displayed next to each element.

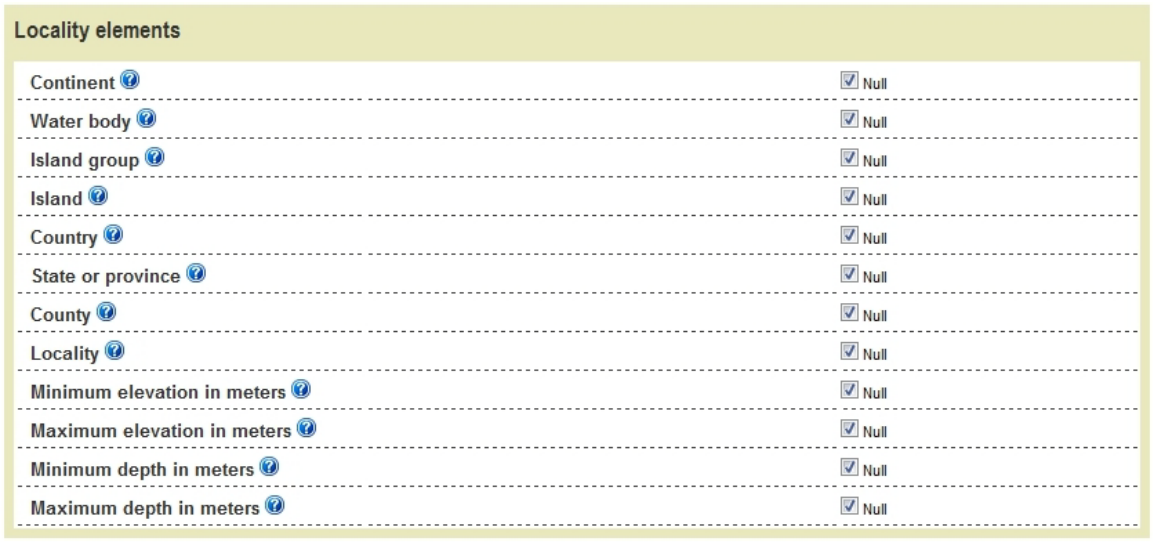

Figure 5 - Save Preserved or Observed Specimen Data – Locality elements table

> ***Note**: All elements in the Locality elements table are set to a null value by default.*

Locality element fields: To define a full, unabbreviated name of a continent, water body, island group, island, country, state or province, county, or locality, in or over which the organism was collected or observed to these fields, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

> ***Note:** To add a new option to any **Locality element** drop-list, type the name of the option into the text field that displays after clicking in the **Other** checkbox.*

> ***Note:** To return to the drop-list of any **Locality element** field, click on the **Other** checkbox to deselect it. To return any **Locality element** field to the default null value, click in or select the **Null** checkbox.*

Minimum elevation in meters field: To add the minimum or actual elevation at which the collection or observation was made to this field, type the elevation value into the field that displays after clicking in the **Null** checkbox. Use negative values for locations below sea level.

Maximum elevation in meters field: To add the maximum or actual elevation at which the collection or observation was made, type the elevation value into the field that displays after clicking in the **Null** checkbox. Use negative values for locations below sea level.

Minimum depth in meters field: To add the minimum or actual depth at which the collection or observation was made, type the depth value into the field that displays after clicking in the **Null** checkbox. Use positive values for locations below the surface.

Maximum depth in meters field: To add the maximum or actual depth at which the collection or observation was made, type the depth value into the field that displays after clicking in the **Null** checkbox. Use positive values for locations below the surface.

4.1.5 Specimens – Collecting elements

The **Collecting elements** table on the **Save Preserved or Observed Specimen Data** page allows users to register information about how the specimen or observation was collected. For the definitions of each of the elements in this table, reference Darwin core 2 elements definitions v1.4 or click on the **Help** icon that is displayed next to each taxonomic element.

> ***Note**: All elements in the **Collecting elements** table are set to a null value by default.*
>
> ***Note:** To add a new option to any **Collecting element** drop-list, type the new option into the text field that displays after clicking in the **Other** checkbox.*
>
> ***Note:** To return to the drop-list of any **Collecting element** field, click on the **Other** checkbox to deselect it. To return any **Collecting element** field to the default null value, click in or select the **Null** checkbox.*

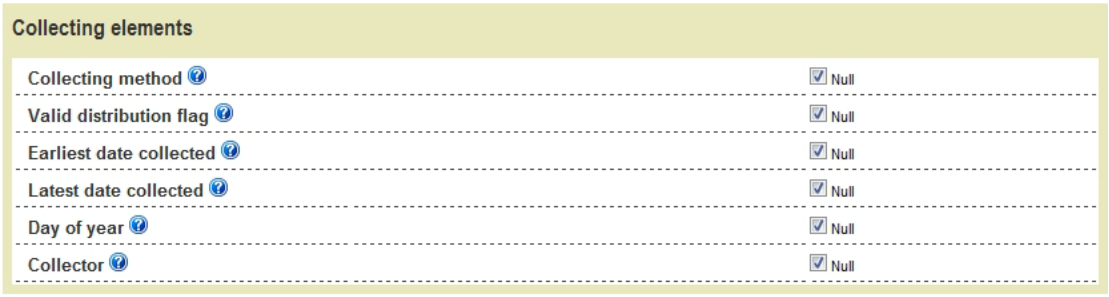

Figure 6 - Save Preserved or Observed Specimen Data – Collecting elements table

Collecting method field: To define the name of, reference to, or brief description of the method or protocol under which the collecting event occurred in this field, choose an option from the drop-list that displays that displays after clicking in the **Null** checkbox.

Valid distribution flag field: To define a flag ("true" or "false") that indicates whether the locality information represents a valid distribution occurrence for a specimen in this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox. Specimens taken from captivity and showing the captive location should use the value "false".

Earliest date collected field: To define the earliest date-time (common era calendar) in a date-time period during which an organism or group of organisms was collected or observed in this field, type the date into the text field that displays after clicking in the **Null** checkbox. If the event is recorded as occurring at a single date-time, populate both earliestdatecollected and latestdatecollected with the same value (see Item 4 below).

> ***Note**: The earliest date collected should be entered in the format yyyy-mm-dd hh:mm:ss*

Latest date collected field: To define the latest date-time (common era calendar) in a date-time period during which an organism or group of organisms was collected or observed in this field, type the date into the field that displays after clicking in the **Null** checkbox. If the event is recorded as occurring at a single date-time, populate both earliestdatecollected and latestdatecollected with the same value.

> ***Note**: The latest date collected should be entered in the format yyyy-mm-dd hh:mm:ss*

Day of year field: To define the ordinal day of the year on which the object or observation was collected in this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox. If the earliestdatecollected and latestdatecollected do not occur on the same day, do not include information in this field.

Collector field: To define the name of the collector of the observation or specimen, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

4.1.6 Specimens – Biological elements

The **Biological elements** table on the **Save Preserved or Observed Specimen Data** page allows users to register biological information about an organism that was observed or about a specimen. For the definitions of each of the elements in this table, reference Darwin core 2 elements definitions v1.4 or click on the **Help** icon that is displayed next to each taxonomic element.

> ***Note**: All elements in the **Biological** elements table are set to a null value by default.*
>
> ***Note:** To add a new option to any **Biological element** drop-list, type the new option into the text field that displays after clicking in the **Other** checkbox.*
>
> ***Note:** To return to the drop-list of any **Biological element** field, click on the **Other** checkbox to deselect it. To return any **Biological element** field to the default null value, click in or select the **Null** checkbox.*

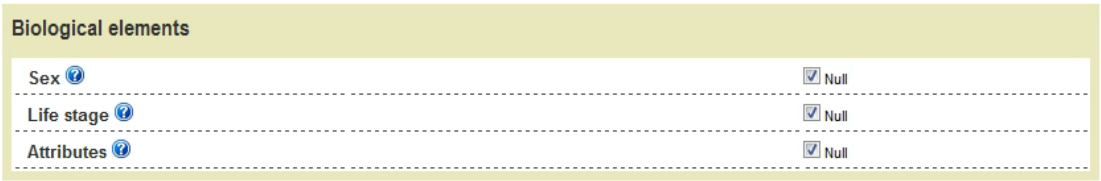

Figure 7 - Save Preserved or Observed Specimen Data – Biological elements table

Sex field: To define the sex of a biological individual represented by the cataloged object or observation in this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

Life stage field: To define the age class, reproductive stage or life stage of the biological individual in this field, choose an option from the drop-list that displays after clicking in the **Null** checkbox.

Attributes field: Type a list of additional measurements or characteristics (concatenated and separated) for which there is no existing semantic element, but which the data provider nevertheless feels the desire to share in this text field.

4.1.7 Specimens – Geospatial elements

The **Geospatial elements** table on the **Save Observations or Species Data** page allows users to register geospatial information about an organism observation or specimen. For the definitions of each of the elements in this table, reference Darwin core 2 elements definitions v1.4 or click on the **Help** icon that is displayed next to each taxonomic element.

> ***Note**: All elements in the **Geospatial elements** table are set to a null value by default.*
>
> ***Note:** To add a new option to any **Geospatial elements** drop-list, type the new option into the text field that displays after clickingin the **Other** checkbox.*
>
> ***Note:** To return to the drop-list of any **Geospatial elements** field, click on the **Other** checkbox to deselect it. To return any **Geospatial elements** field to the default null value, click in or select the **Null** checkbox.*

Figure 8 - Save Preserved or Observed Specimen Data – Geospatial elements table

Geospatial elements: To define the latitude and longitude at which the observation or specimen was collected; the coordinate uncertainty; and any additional geospatial remarks in the corresponding fields, type the values in the formats outlined below into the text field that displays after clicking in the **Null** checkbox.

Decimal Latitude field format: The latitude of the geographic center of a location where the event occurred (organism collected, observation made), expressed in decimal degrees. Positive values are North of the Equator, negative values are South of the Equator. e.g. -41.0983423.

Decimal Longitude field format: The longitude of the geographic center of a location where an event occurred (organism collected, observation made), expressed in decimal degrees. Positive values are East of the Greenwich Meridian, negative values are West of the Greenwich Meridian. e.g. -71.0943235.

Geodetic Datum field: The geodetic datum to which the latitude and longitude refer. If not known, use "not recorded". Example: "WGS84".

Coordinate uncertainty in meters field: The upper limit of the distance (in meters) from the given DecimalLatitude and DecimalLongitude describing a circle within which the whole of the described locality lies. Leave the value empty if the uncertainty is unknown, cannot be estimated, or is not applicable (because there are no coordinates). Describes the point-radius representation of the location, along with DecimalLatitude, DecimalLongitude, and GeodeticDatum. Zero is not a valid value for this element. E.g. 0.5

Point radius spatial fit field: A measure of how well the circle defined by the coordinates and uncertainty match the original spatial representation, as a ratio of the area of the circle to the

area of the original spatial representation. Legal values are 0, greater than or equal to 1, or undefined. A value of 1 is an exact match or 100% overlap. A value of 0 should be used if the given georeference does not completely contain the original representation. The PointRadiusSpatialFit is undefined if the original representation is a point without uncertainty and the given georeference is not that same point (without uncertainty). If both the original and the given georeference are the same point, the PointRadiusSpatialFit is 1. Detailed explanations with graphical examples can be found in the Guide to Best Practices for Georeferencing <http://www.gbif.org/prog/digit/Georeferencing> (Chapman and Wieczorek, eds. 2006).

Verbatim Coordinates field: A text representation of the coordinate data (Latitude/ Longitude, UTM, TRS, etc.) from its original source if it cannot be separated into its component parts. Example: "470999 1234300".

Verbatim Latitude field: A text representation of the Latitude part of the coordinate data from its original source. Example: 47d09'99"N.

Verbatim Longitude field: A text representation of the Longitude part of the coordinate data from its original source. Example: -122.43254.

Verbatim Coordinate System field: The name of the system in which the verbatim geographic coordinates were recorded. Examples: "decimal degrees", "degrees minutes seconds", "degrees decimal minutes", "UTM".

Georeference Protocol field: A reference to the methods used for determining the coordinates and uncertainties. Example: "http://manisnet.org/GeorefGuide.html".

Georeference Sources field: A list of maps, gazetteers or other resources used to georeference the locality. The content of this concept is meant to be specific enough to allow anyone in the future to use the same resource to georeference the same locality. Examples: "USGS 1:24000 Florence Montana Quad", "Terrametrics 2008 on Google Earth".

Georeference Verification Status field: A categorical description of the extent to which the georeference has been verified to represent the location where the specimen or observation was collected. This element should be vocabulary-controlled. Examples: "requires verification", "verified by collector", "verified by curator".

Georeference Remarks field: Comments about the spatial description determination, explaining assumptions made in addition or opposition to those formalized in the method referred to in GeoreferenceProtocol.

Footprint WKT field: A Well-Known Text (WKT; see <http://en.wikipedia.org/wiki/Well-known_text>) representation of the shape (footprint, geometry) that defines the location of the occurrence. The same place may have both a point-radius representation (see <http://wiki.tdwg.org/twiki/bin/view/DarwinCore/DecimalLatitude>) and a footprint

representation, and they may differ from each other for the same occurrence. Example: the one-degree bounding box with opposite corners at (longitude=10, latitude=20) and (longitude=11, latitude=21) would be expressed in well-known text as POLYGON ((10 20, 11 20, 11 21, 10 21, 10 20)).

Footprint Spatial Fit field: A measure of how well the geometry expressed in the footprint match the original spatial representation, as a ratio of the area of the footprint given to the area of the original spatial representation. Legal values are 0, greater than or equal to 1, or undefined. A value of 1 is an exact match or 100% overlap. A value of 0 should be used if the given georeference does not completely contain the original representation. The FootprintSpatialFit is undefined if the original representation is a point without uncertainty and the given georeference is not that same point (without uncertainty). If both the original and the given georeference are the same point, the FootprintSpatialFit is 1. Detailed explanations with graphical examples can be found in the Guide to Best Practices for Georeferencing <http://www.gbif.org/prog/digit/Georeferencing> (Chapman and Wieczorek, eds. 2006).

4.1.8 Specimens – References elements

The **References elements** table on the **Save Observations or Species Data** page allows users to register reference or source information associated with an organism observation or specimen. For the definitions of each of the elements in this table, reference Darwin core 2 elements definitions v1.4 or click on the **Help** icon that is displayed next to each taxonomic element.

> ***Note**: All elements in the **References elements** table are set to a null value by default.*
>
> ***Note:** To add a new option to any **References elements** drop-list, type the new option into the text field that displays after clicking in the **Other** checkbox.*
>
> ***Note:** To return to the drop-list of any **References elements** field, click on the **Other** checkbox to deselect it. To return any **References elements** field to the default null value, click in or select the **Null** checkbox.*

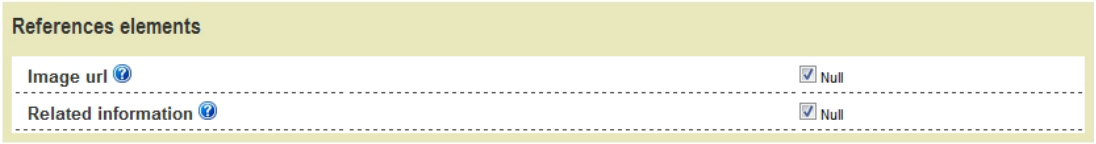

Figure 9 - Save Observation or Species Data– Specimens – References elements table

Reference elements: To define an image URL (such as for a photograph of a specimen) or related information into each of these fields, type the URL or related information into the text field that displays after clicking in the **Null** checkbox.

***Note**: This field is **Required** for specimen data (preserved or observed specimens) derived from bibliographic sources rather than from collection records.*

5 Save Interaction Data

5.1 OVERVIEW

The **Save Interaction Data** pages (Figure 11) can be accessed by clicking on the **Save Interaction Data** link on the **Home** page of the Pollinator Data Digitizer application. The **Save Interaction Data** page allows users to create records of interactions between specimens. These interactions can be recorded as occurring between two organisms that are each represented by a preserved specimen record (Preserved specimens interaction); between one organism represented by a preserved specimen record and another organism represented by an observed specimen record (Preserved and observed specimens interaction); and between two organisms that are each represented by observed specimen records (Observed specimens interaction). There is a different version of the **Save Interaction Data** page for each of the interaction types described here. Each version can be accessed by selecting one of the three navigation options listed horizontally on the **Save Interaction Data** page.

***Note:** Before attempting to create records of interactions between specimens (preserved or observed), the individual records of each of the two specimens involved in the interaction must have been created.*

Figure 10 - Save Interaction Data – Navigation Options

The following paragraphs describe each of the pages for creating interaction records and the elements they contain, their function, and how to use them.

5.1.1 Preserved Specimens Interactions (Save interaction data)

The **Save interaction data** page (Figure 11) allows users to register information about an interaction between two organisms that are each represented by a specimen record. It can be accessed by clicking on the **Save interaction data** link on the **Home** page of the Pollinator Data Digitizer application.

To create an interaction record, define the first organism by choosing the corresponding Global Unique Identifier from the **Preserved specimens** list; then define the related organism by choosing the corresponding Global Unique Identifier from the **Preserved specimens** list; and choose an option from the **Interaction type** list that describes the type of interaction that occurs between these two organisms. Add any related information about the interaction in the **Related information** text field, and save the interaction record by clicking on the **Insert** button.

> ***Note:*** *Before attempting to create records of interactions between preserved specimens, the individual records of each of the two specimens involved in the interaction must have been created. They will then appear on the specimen list.*
>
> ***Note****: The* ***Related information*** *text field in the* ***Interaction*** *table is set to Null by default. To add text to this field, type in the text field that displays after clicking in the* ***Null*** *checkbox. This field is* ***Required*** *for interactions involving specimen data that is derived from bibliographic sources rather than from collection records.*

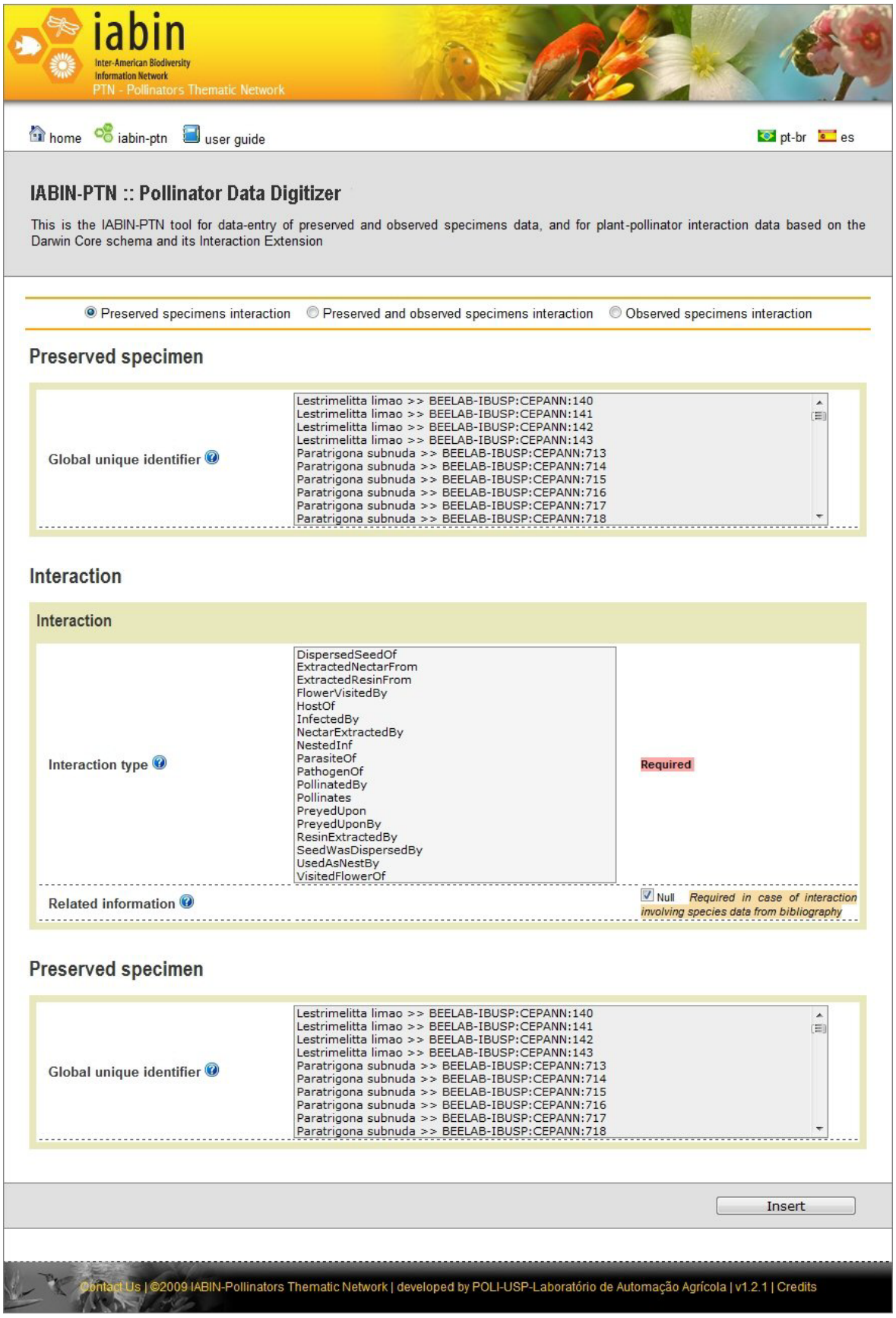

Figure 11 - Save Preserved Specimens Interaction Data

5.1.2 Save Preserved and Observed Specimens Interaction

The **Save Preserved and Observed Specimens Interaction** page (Figure 12) allows users to register information about an interaction between an organism that is represented by a preserved specimen record and an organism that is represented by an observed specimen record. The **Save Preserved and Observed Specimens Interaction data** page can be accessed by clicking on the **Save Interaction Data** link on the **Home** page of the Pollinator Data Digitizer application and then choosing the **Preserved and Observed Specimens Interaction** option from the horizontal navigation bar.

To create a preserved and observed specimens interaction record, define the Preserved specimen by choosing the corresponding Global Unique Identifier from the **Preserved specimens** list; then define the related specimens by choosing the Global Unique Identifier of the specimens from the **Observed specimens** list; and choose an option from the **Interaction type** list that describes the type of interaction that occurs between these two organisms. Add any related information about the interaction in the **Related information** text field, and save the interaction record by clicking on the **Insert** button.

> ***Note**: The **Related information** text field in the **Interaction** table is set to Null by default. To add text to this field, type in the text field that displays after clicking in the **Null** checkbox. This is **Required** for interactions involving specimen data derived from bibliographic sources rather than from collection records.*

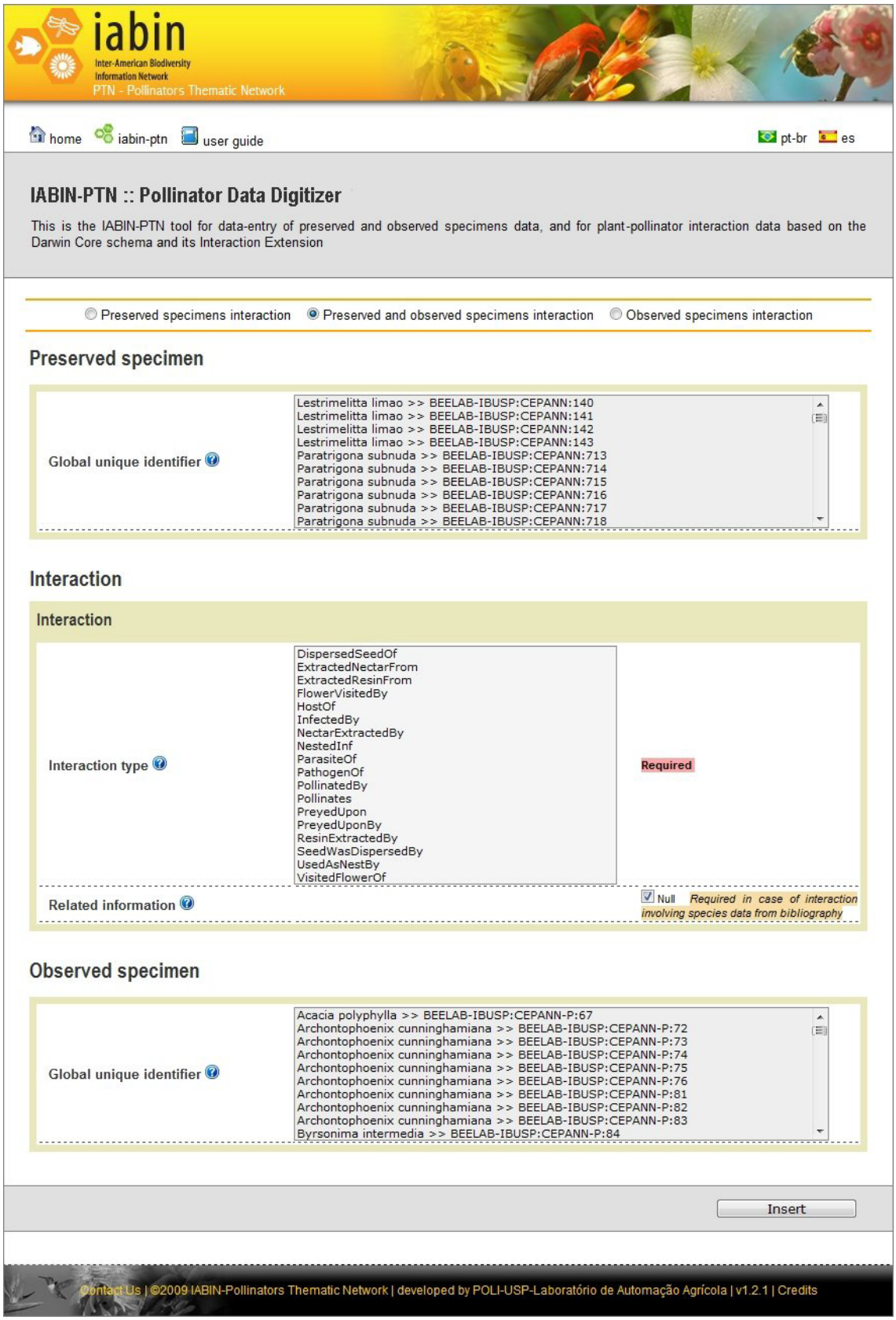

Figure 12 - Save Preserved Specimen and Observed Specimens Interaction Data

5.1.3 Save Observed Specimens Interactions

The **Save Observed Specimens Interaction data** page (Figure 13) allows users to register information about an interaction between two organisms that are both represented by an observation record. The **Save Observed Specimens Interaction data** page can be accessed by clicking on the **Save Interaction Data** link on the **Home** page of the Pollinator Data Digitizer application and then choosing the **Save Observed Specimens Interaction data** option from the horizontal navigation bar.

To create an observed specimens interaction record, define the Observed specimens by choosing the Global Unique Identifier of the specimens from the **Observed specimens** list; then define the related specimens by choosing the Global Unique Identifier of the specimens from the **Observed specimens** list; and choose an option from the **Interaction type** list that describes the type of interaction that occurs between these two organisms. Add any related information about the interaction in the **Related information** text field, and save the interaction record by clicking on the **Insert** button.

> ***Note**: The **Related information** text field in the **Interaction** table is set to Null by default. To add text to this field, type in the text field that displays after clicking in the **Null** checkbox. This field is **Required** for interactions involving specimen data derived from bibliographic sources rather than from collection records.*

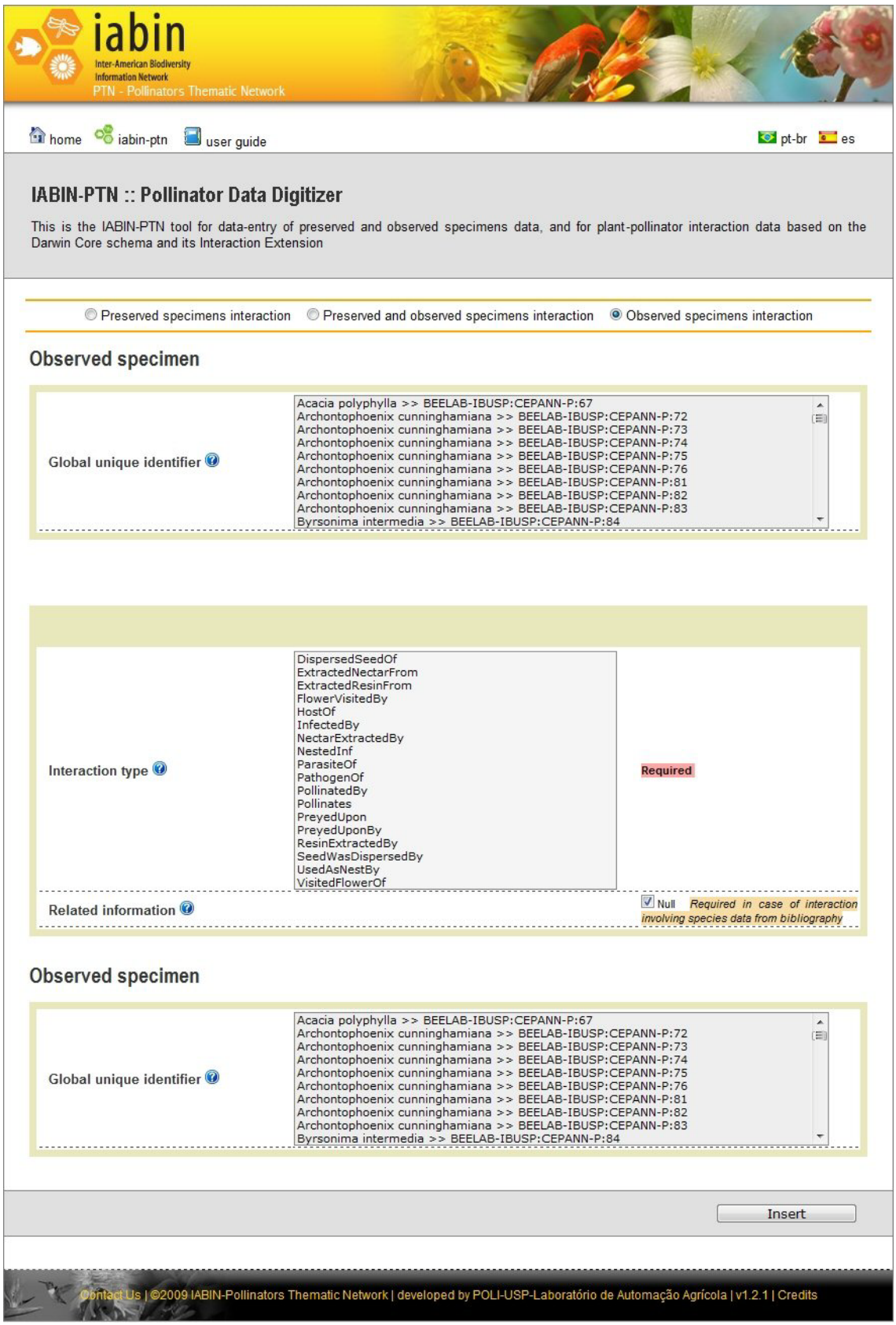

Figure 13 - Save Observed Specimens Interaction Data

6 View Saved Records

6.1 OVERVIEW

The **View Saved Records** page (Figure 14) allows users to view three different types of data: preserved specimen, observed specimen, and interaction data. Each view can be accessed by selecting one of the three navigation options in the horizontal navigation bar on the page (Figure 14).

The **View Saved Records** page can be accessed by clicking on the **View Saved Records** link on the **Home** page of the Pollinator Data Digitizer application. Users can choose to display only 100, 1000, 5000 or All records by selecting an option from the **Number of records** drop-list (Figure 14). And the **Order by** drop-list allows users to order the list of records by global unique identifier or scientific name (Figure 14).

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PTN - Pollinators Thematic Network
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user guide
pt-br
es
IABIN-PTN :: Pollinator Data Digitizer
This is the IABIN-PTN tool for data-entry of preserved and observed specimens data, and for plant-pollinator interaction data based on the Darwin Core schema and its Interaction Extension
Number of records (10) | Order by (Global unique identifier)
View preserved specimens
View observed specimens
View interaction data
Global unique identifier
Scientific name
BEELAB-IBUSP:CEPANN:140 >> Lestrimelitta limao
Lestrimelitta limao
BEELAB-IBUSP:CEPANN:141 >> Lestrimelitta limao
Lestrimelitta limao
BEELAB-IBUSP:CEPANN:142 >> Lestrimelitta limao
Lestrimelitta limao
BEELAB-IBUSP:CEPANN:143 >> Lestrimelitta limao
Lestrimelitta limao
BEELAB-IBUSP:CEPANN:648 >> Scaptotrigona sp.
Scaptotrigona sp.
BEELAB-IBUSP:CEPANN:649 >> Scaptotrigona sp.
Scaptotrigona sp.
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Figure 14 - View Saved Records

6.1.1 View Preserved Specimens

Selecting the **View Preserved Specimens** option from the horizontal navigation bar on the **View Saved Records** page will display a listing of Preserved Specimen records. Click on the icon that is next to each record to display an expanded list of the elements within that record (Figure 15). Click on the name of an element group to expand or collapse a detailed view of it.

Warning: Click Delete only if you are sure you wish to delete this record.

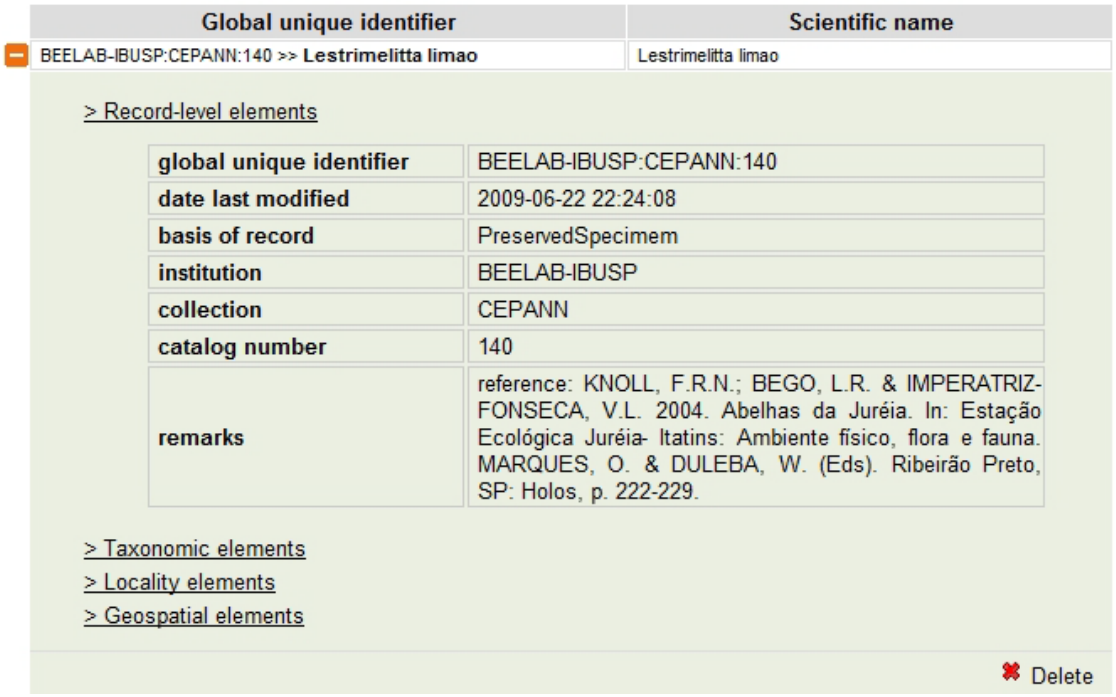

Figure 15 - View Observation Data - Expanded record view.

6.1.2 View Observed Specimens

Selecting the **View Observed Specimens** option from the horizontal navigation bar on the **View Saved Records** page will display a listing of Observed Specimen records. Click on the icon that is next to each record, to display an expanded list of the elements within the record (Figure 15). Click on the name of an element group to expand or collapse a detailed view of it.

6.1.3 View Interaction Data

Selecting the **View Interaction data** option from the horizontal navigation bar on the **View Saved Records** page will display a listing of related Interaction records. Click on the icon that is next to each record, to display an expanded list of the elements within that record (Figure 15). Click on the name of an element group to expand or collapse a detailed view of it.

Tapir provider – Preserved or Observed Specimen/Interaction

6.2 OVERVIEW

The Pollinator Data Digitizer provides the capability for generating a TAPIR provider for serving specimen records and interaction records to data portals such as the IABIN PTN Data Portal and the Global Biodiversity Information Facility.

Metadata associated with each of these TAPIR provider services can be viewed by clicking on the **Tapir provider – Preserved or Observed Specimen** or **Tapir provider – Interaction** links on the **Home** page of the of the Pollinator Data Digitizer application.

Users can also view the capabilities of each provider, including detailed views of **Mapped schemas**, by clicking on the **See TAPIR capabilities** link at the bottom of the metadata page for each service.